

200

START

ETHERNET TRANSCEIVER 100
DECODE AND ENCODE DATA
SIGNALS IN A DEFAULT
INDUSTRY-COMPLIANT MODE

SENSING, AT DECODER 125, DATA
SIGNALS RECEIVED IN ONE
OF A DEFAULT MODE AND A
CUSTOM MODE

IS DATA
RECEIVED IN
CUSTOM MODE
AT DECODER 125
?
"Y"
"N"

ETHERNET TRANSCEIVER 100
DECODE AND ENCODE DATA
SIGNALS IN A CUSTOM MODE
AND SENSE, AT DECODER
125, DATA SIGNALS RECEIVED
IN CUSTOM MODE

IS
RECEIVED
DATA IN CUSTOM
MODE AT
DECODER 125
?
"Y"
"N"

RESET OPERATING MODE OF
ETHERNET TRANSCEIVER 100
TO DEFAULT INDUSTRY-COMPLIANT
MODE USING CONTROLLER 130

FIGURE 2a

205

START

ETHERNET TRANSCEIVER 100
DECODE AND ENCODE DATA SIGNALS
IN A DEFAULT CUSTOM MODE

SENSING, AT DECODER 125, DATA
SIGNALS RECEIVED IN ONE OF A
DEFAULT CUSTOM MODE AND A
INDUSTRY-COMPLIANT MODE

IS
DATA RECEIVED
IN INDUSTRY-
COMPLIANT MODE AT
DECODER 125
?
"Y"
"N"

ETHERNET TRANSCEIVER 100
ENCODE AND DECODE DATA
SIGNALS IN AN INDUSTRY-
COMPLIANT MODE AND SENSE,
AT DECODER 125, DATA SIGNALS
RECEIVED IN INDUSTRY-COMPLIANT
MODE

IS
RECEIVED
DATA IN INDUSTRY-
COMPLIANT MODE AT
DECODER 125
?
"Y"
"N"

RESET OPERATING MODE OF ETHERNET
TRANSCEIVER 100 TO DEFAULT
CUSTOM MODE USING CONTROLLER 130

FIGURE 2b

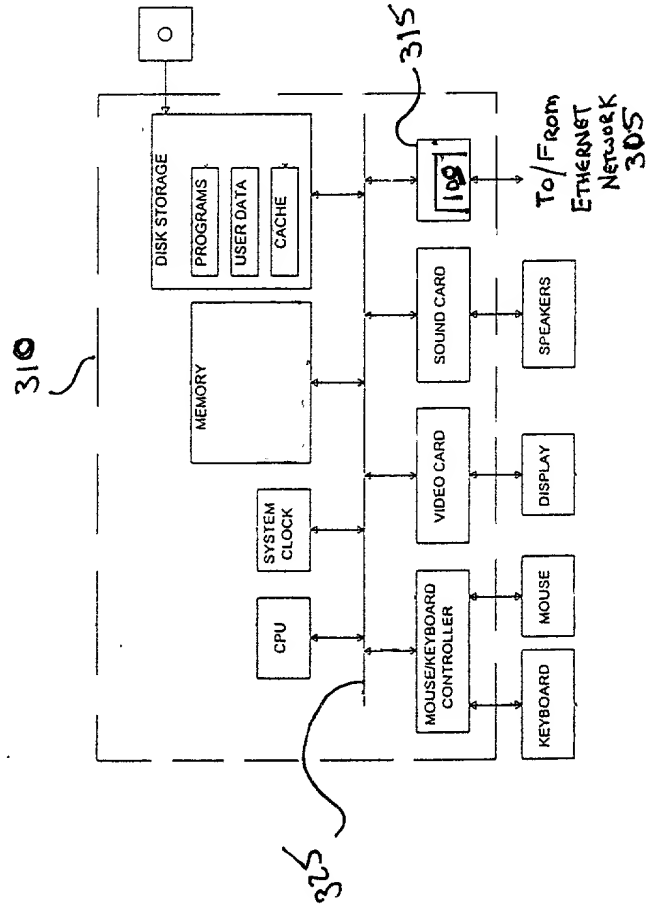
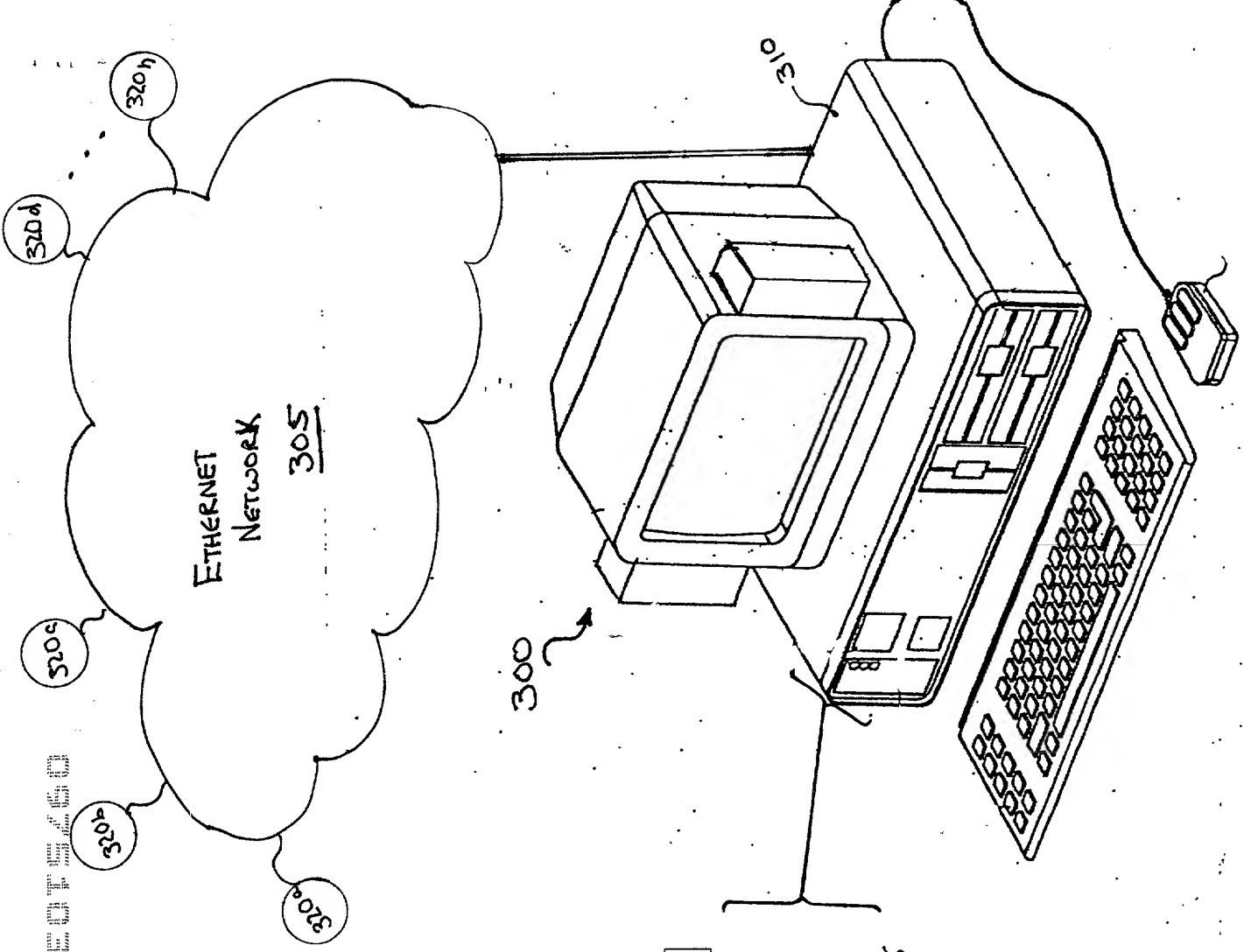


FIGURE 3

400

FIG. 4 is a flowchart illustrating a process for data transmission and processing. The process begins at a START node (400) and proceeds to a block (405) where the computer system 300 executes one or more programs stored in memory or disk storage. The process then moves to a block (410) where the network connection using Ethernet transceiver 100 of NIC 315 is monitored. A decision diamond (415) checks if data is to be encoded and transmitted. If "Y", the process proceeds to a block (420) where data is encoded and transmitted using Ethernet 100. If "N", the process proceeds to a decision diamond (425) where data is to be decoded and processed by the computer system. If "Y", the process proceeds to a block (430) where data is decoded in a selected one of industry-compliant mode or custom mode. If "N", the process proceeds to a block (435) where data related or responsive to data in the selected mode is encoded. The process then loops back to the START node (400).

START

COMPUTER SYSTEM 300 EXECUTES
ONES OF A PLURALITY OF PROGRAMS
STORED IN MEMORY OR DISK STORAGE

405

MONITOR NETWORK
CONNECTION USING
ETHERNET TRANSCEIVER
100 OF NIC 315

410

DATA
TO BE ENCODED
AND TRANSMITTED?

415

ENCODE AND
TRANSMIT
DATA USING
ETHERNET 100

420

DATA
TO BE DECODED
AND PROCESSED
BY COMPUTER
SYSTEM?

425

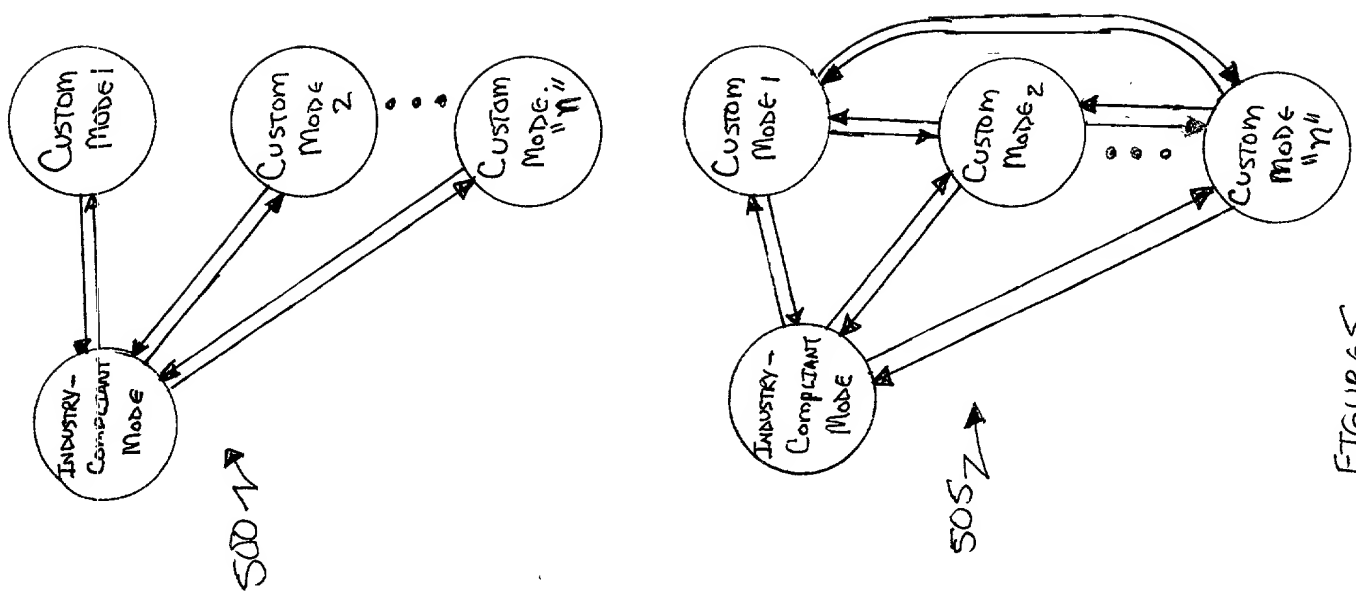
ENCODE RELATED
OR RESPONSIVE
DATA IN THE
SELECTED MODE

435

DECODE DATA IN
A SELECTED ONE
OF INDUSTRY-
COMPLIANT MODE
OR CUSTOM MODE

430

FIGURE 4



FIGURES